DOCUMENT RESUME

ED 180 228 FL 010 845

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TITLE Second Language Learning and Teaching in Classroom Settings: The Learning Study, Year One.
INSTITUTION Ontario Inst. for Studies in Education, Toronto.
SPONS AGENCY Department of the Secretary of State, Ottawa (Ontario).
PUB DATE Dec 77
NOTE 96p.; Prepared through the Modern Language Centre

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Academic Achievement; *Academic Aptitude; Achievement Tests; Educational Research; Error Analysis (Language); Factor Analysis; *French; High School Students; Language Instruction; Language Research; Language Tests; *Learning Processes; Models; Questionnaires; Secondary Education; *Second Language Learning; Student Attitudes; *Success Factors
IDENTIFIERS Field Independence

ABSTRACT

High school students studying French as a second language in Toronto were administered a questionnaire and a variety of achievement tests in French. Results were analyzed to determine the effects of learner characteristics on the development of second language competence. Four factors in learning success were posited: attitude, strategy, aptitude, and field independence. Aptitude consistently accounted for the largest portion of the variance in achievement. Only certain strategies were found to be responsible for achievement, the chief of which was functional practice. The most critical component of the attitude factor in terms of its effect on achievement was emotional intensity. Field independence was not found to be significantly related to achievement. These findings are taken into account in the revision of a model of language learning processes, which is viewed as having pedagogical implications. (JB)

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SECOND LANGUAGE LEARNING AND TEACHING IN CLASSROOM SETTINGS:

THE LEARNING STUDY

Year One

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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FL010845

The Modern Language Centre
The Ontario Institute for Studies in Education
December, 1977

This project was funded by the Department of the Secretary of State

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THE LEARNING STUDY

The first year of the Learning Study had three objectives (see Grant Request for Year One, p. 11). The investigation was to develop and examine a model of second language learning, to develop a methodology for second language learning research, and to provide information about the second language learning process. Progress was made in all three areas, and the findings relevant to each of these objectives shall be presented in turn.

MODEL OF SECOND LANGUAGE LEARNING

The theoretical task of the study was to develop a model of second language learning which could explain existing language learning data and provide a framework within which to design and conduct new research. The conceptualization of the model proceeded in response to several questions which emerged from recent literature (e.g., Naiman et al., 1978; Brown, 1973; Schumann, 1976). The questions may be stated as follows: (1) What are the critical factors involved in second language learning? (2) What is the nature of the underlying mental processes? (3) What accounts for the relative degree of mastery achieved by different individuals, by the same individuals but in different skills, or by individuals in different learning environments?

In response to the first question, the model attempts to accomodate the relevant components of second language learning which have emerged in previous studies. The interactions between these components which represent the concomitant conscious and unconscious mental activities is the

basis for the description of the hypothesized mental processes referred to in the second question. Finally, the factors that may be specific to certain learners or to certain learning situations are considered in the answer to the third question.

Operation of the Model

The proposed model (Figure 1) is organized on three levels - Input, Knowledge, and Output. Input accounts for two different language experiences that arise from encountering the language either in a formal instructional setting, e.g., in the language classroom, or in a communicative setting, e.g., meeting native speakers of the target language. At the knowledge level, three sources of information within the learner are differentiated - Other Knowledge, which includes general knowledge of the world and knowledge of languages other than the target language; Explicit Linguistic Knowledge, which refers to the conscious knowledge of formal features of the target language, e.g., morphology or syntax; and Implicit Linguistic Knowledge, which is characterized by the unconscious mastery of the second language. It is hypothesized that the formal learning experience described above feeds into both the Explicit and Implicit Knowledge sources, whereas functional (communicative) language exposure will increase mainly the Implicit Linguistic Knowledge as no formal rules need be explicated. Other Knowledge is assumed to be present in each learner to varying degrees and may or may not be affected by either type of input. The third level, Output, comprises both production and comprehension of the second language.

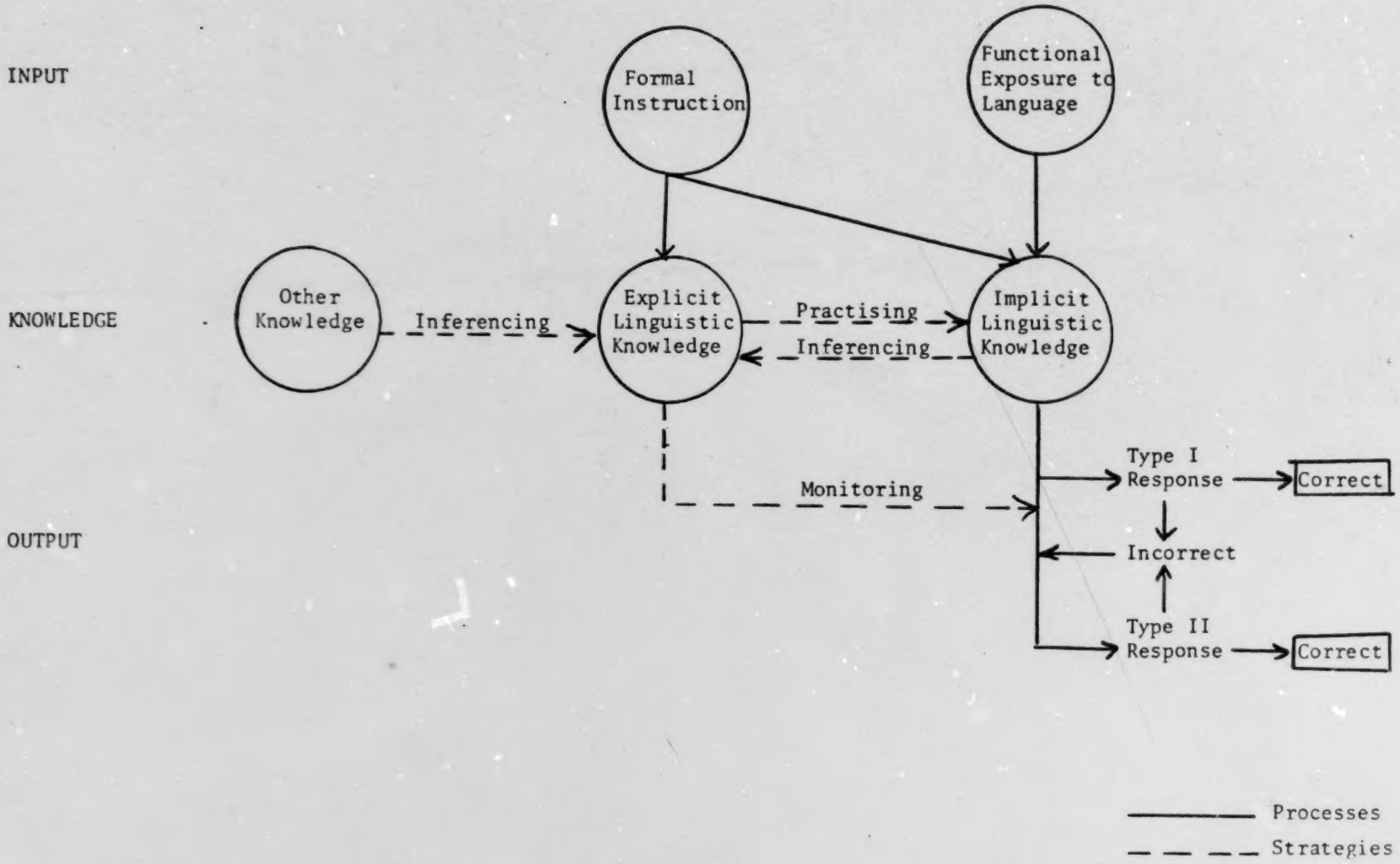

Figure 1. Model of Second Language Learning

The operation of the model is explained in terms of three parameters - learning processes, learning strategies, and learner factors. Learning processes are concerned both with the way in which the three knowledge sources are built up and utilized for specific language tasks and with the mechanisms underlying the production of responses. These processes are determined by biological, social, and cultural factors and are probably not subject to modification by the language learner.

Learning strategies, that is, practising, monitoring, and inferencing, relate the various knowledge sources to each other and to language outcomes. These are conscious approaches the learner may employ to facilitate learning and increase linguistic proficiency. They operate by maximizing the use of available information so that language competence is improved.

Practice occurs whenever the second language is exercised. The content of practice, however, can be twofold. The learner may focus on formal aspects of the language, e.g., memorizing certain structures or vocabulary rules, or he may expose himself to communicative situations, thus exercising functional practice. As it is represented in the model, practising is described as the transfer of information from Explicit to Implicit Knowledge, thus "automatizing" the information through use.

The concept of monitoring has been adapted from Krashen's posited model of a language monitor (Krashen, 1976). Monitoring improves or corrects the linguistic output by utilizing explicit knowledge of the target language. The purpose of monitoring is to deliberately formulate and/or modify linguistic output. Two essential conditions for the monitor to operate are sufficient time and attention to form (Krashen, 1976). The

model represents monitoring as influencing the response line with information from Explicit Linguistic Knowledge after a certain amount of time has passed.

Inferencing is defined as the derivation of meaning on the basis of linguistic or non-linguistic data available to the learner (Carton, 1971). The model shows that inferencing may derive the relevant information from either Other Knowledge or Implicit Linguistic Knowledge and bring it into the Explicit Linguistic Knowledge, in other words, into the consciousness of the language learner.

Learner characteristics are individual differences that determine the efficiency with which the model will operate for particular language learners. The literature on second language learning has identified several of these characteristics which are relevant to achievement.

Attitude and motivation have consistently been shown to be an important determiner of success (Gardner, 1960; Gardner and Lambert, 1972; Naiman et al., 1978). Similarly, language learning aptitude has been proven to be an important component of language learning achievement and accounts for some of the variability between language learners (Carroll, 1962; Pimsleur et al., 1966; Wesche, 1977). Field Independence, a particular cognitive style, has also been shown to explain some variance in language learning by correlating highly with achievement and producing errors characteristically different from those committed by field dependent learners (Tucker et al., 1976; Naiman et al., 1978). The effects of field independence, however, have been inconsistent in the literature.

The examination of the model in the first year was confined to a

consideration of the role played by learner characteristics and learning strategies on language outcomes. These factors are hypothesized to affect both individual achievement in that some learners may be endowed with more of the necessary learner characteristics, and task achievement in that the strategies may differentially facilitate performance on various language tasks.

Examination of the Model

The model may be used to explain both individual variance in achievement and variance in the development of different skills by identifying the factors relevant to each. Such questions have important pedagogical value. If the characteristics identified as the important ones are amenable to instructional modification, such as the use of particular strategies, then language learning may be facilitated. To the extent that learning depends upon less flexible characteristics, such as language aptitude, the effects of various instructional procedures would be minimized. Results of the pilot studies showed a promising role played by the use of learning strategies (Bialystok and Fröhlich, 1977).

The model as it incorporates these factors, may be used to clarify the processes involved in the attainment of a second language. Relationships between type of language experience, or input, and language outcomes, or competencies, may be explained by considering the mediating effects of the learner characteristics and learning strategies. By considering the interrelationships between the components of the model and these factors,

it is possible to generate predictions enumerating the particular factors which are responsible for the achievement of specific language competencies. The premise is that second language learning is not a monolithic enterprise controlled by a few critical factors; rather, the development of various language skills proceeds somewhat independently, each skill being contingent upon the presence of slightly different learning factors. Such an analysis would explain differential achievement in various language skills, such as speaking and reading, as well as clarifying confusions in the literature in which various studies produce discrepant conclusions regarding the factors most relevant to second language learning.

In order to pursue the possibility that various learning factors are specific to certain types of achievement, it was necessary to find a meaningful way of analyzing the differences between language skills. Two parameters were used to create a 2 x 2 matrix consisting of four cells, each representing a unique type of language skill. The first parameter, modality, refers to whether the skill requires oral or written language. The second parameter, purpose, refers to the formal or functional nature of the skill.

Differences between oral and written language have recently been discussed for a first language by Olson (1977). He argues that the two language media each imply a different set of organizational and cognitive factors which affect the nature of the language. For example, written language presents logical, conventional arguments in the absence of context and without consideration of prior knowledge or understanding of the reader. Oral language, on the other hand, implies a shared context between participants and may make use of social factors, such as authority relationships, instead of

logical structures in the presentation of arguments. These differences can be seen in linguistic devices and structures appropriate to each modality and may also be reflected in the second language learner's attempt to understand or produce language which is either oral or written.

The formal or functional purpose of a language task has been described by Stern (Stern, 1974; Stern et al., 1976) and refers to whether the concern is with the linguistic structure or the intended communication of meaning. A language encounter motivated by an attempt to understand the formal aspects of the linguistic code must differ in essential ways from one in which communication is of prime concern. In each case, success of the encounter would depend upon a different set of abilities and involve different mental processes. Whereas language aptitude may be most important for strictly formal mastery of the language system, motivation and attitude may have a greater effect on one's ability to communicate in the language. Thus, a language task oriented to one of these purposes may differ from tasks which appear similar but involve different assumptions of purpose.

The model accounts for differences between formal and functional tasks primarily through the utilization of different knowledge sources. While Explicit Linguistic Knowledge contains specific details of grammar and form, Implicit Linguistic Knowledge contains the intuitive information generally exploited in communicative attempts. Various learning strategies, such as practising and inferencing, may be employed to transfer specific information between these sources, but a given language situation will nevertheless draw on the information from a particular source, depending

on the formal or functional demands of the task.

The language learning model and the two distinctions regarding modality and purpose provided the theoretical basis for the empirical work conducted in Year One. This theoretical structure, however, shall be reconsidered in terms of the experimental results.

DESIGN OF THE STUDY

The purpose of the study was to explore aspects of the model in an attempt to understand the nature of second language learning. A group of high school students learning French as a second language was randomly selected as the sample. The tests were administered to these students in their classroom during their French periods. With the exception of occasional absentees, all students were given all tests.

Subjects

The study was conducted in a grade 10 and 12 class in each of three schools, producing six experimental classes. All three schools were situated in middle-class areas of Toronto.

The total sample consisted of 157 students. However, due to occasional absentees during test administration, the sample size for various tests and subsequent data analyses varied.

The majority of the students who provided the requested background information had begun to learn French in grade 5 or 6 in a regular school

program (59.4 per cent); 27.3 per cent had started earlier and 13.3 per cent later. Most students (79.3 per cent) had no previous knowledge of French; 17.2 per cent indicated that they knew a little bit of French and a few students claimed that they had a fair or good knowledge of French before they started their formal language training in school. As the variation in length of exposure to the second language was slight, it was not included among the independent variables.

Previous research has indicated that native competence in another language can have a positive effect on achievement (Bialystok and Fröhlich, 1977). It had, therefore, been intended to select a group of students with a homogeneous native language background. Two of the schools (four classes) provided this homogeneity. As was discovered later, one school had a greater representation of immigrants; in the grade 10 class, 46 per cent of the students came from monolingual, English-speaking homes, 54 per cent communicated either in English plus another language at home or only in another language. The pattern of the grade 12 class was similar: 48 per cent came from an English background; for 52 per cent, English plus another language or a language other than English were the means of communication in their homes. Italian and Chinese were represented most frequently; among the other languages spoken at home were Portuguese, Greek and German. In order to retain a reasonably large sample, the immigrant students were included among the subjects for this study.

Instruments

Independent Variables

To test the hypothesis that learner characteristics will affect the degree and type of linguistic competence achieved by the individual, the following learner characteristics were measured; (1) Attitude and Motivation, (2) second/foreign language Aptitude, (3) Field Independence and (4) use of learning Strategies A more detailed rationale for the selection of these particular characteristics is presented in Bialystok and Fröhlich (1977).

Attitude and Motivation were assessed by Gardner and Smythe's National Test Battery, Form A (1975), which is an abbreviated form of the original test used in Gardner and Lambert's early research studies. This test yields an attitude measure composed of three scores: (1) integrative orientation, (2) motivational intensity and (3) evaluation of the learning situation.

The test for Aptitude was the short form of the Modern Language Aptitude Test (MLAT) developed by Carroll and Sapon (1958). This test has proven to be a useful predictor of success for learning a second/foreign language[2] in a formal setting (Carroll, 1965).

Field Independence was assessed by the Hidden Figures Test - V (1962). This test measures the subject's ability to identify a simple figure within a complex design displaying a number of distracting and irrelevant stimuli. Field independent subjects are able to locate the simple figure while field dependent subjects respond to the total configuration and fail to find the simple figure.

A questionnaire was developed by the researchers to determine how

often the individual student employed each of the learning strategies discussed in the model. A detailed description and discussion follows in the section Methodological Developments.

Dependent Variables

Various achievement measures were necessary in order to meet the criteria of formal/functional tests and oral/written modality.

A formal oral test was developed by the researchers and is explained in detail in the section Methodological Developments.

The remaining tests were adapted from the International Educational Achievement (I.E.A.) tests of French as a foreign language. The formal written test consisted of the I.E.A. French Writing Test, Population II (for grade 10), items 1-32 and Population IV (for grade 12), items 1-32. These tests were fill-in-the-blank type tests, focusing on grammatical aspects, e.g., "Il achète beaucoup (de) livres."

The I.E.A. French Listening Test, Population II (for grade 10), items 24-40 and Population IV (for grade 12), items 17-40, was selected as a functional oral test. The latter parts of the tests were chosen because they involve listening to longer passages (dialogues, dramatic scenes), thus emphasizing the contextual meaning rather than the formal features of the language.

A functional test involving the written modality was provided by the French Reading Test, Population II (for grade 10), items 19-35 and Population IV (for grade 12), items 18-39. Again, the last sections of these tests were chosen because they consisted of coherent passages instead of isolated sentences.

While these tests do not provide truly communicative measures, they are closer to functional use than are discrete point tests of linguistic competence.

Procedure

Before any tests or questionnaires were administered, a brief explanation of the purpose of the class visits and subsequent tests was provided. The students were told that the investigators were interested in finding out how French as a second language was learned in a regular high school program and that they would be given several questionnaires and learning tasks. It was emphasized to the students that their responses to the questionnaires and their test results would be kept confidential and that they would have no effect on their school marks.

All the instruments were administered during the period from February to May in one week intervals, usually by the same investigator.

With the exception of those tests which were strictly timed (Oral Grammar Test and I.E.A. French Listening Test), students were given as much time as they required to complete the tests.

METHODOLOGICAL DEVELOPMENTS

The second objective of the Learning Study, as outlined in the original grant request, was to develop methodologies appropriate for second language learning research. Since research in this area is fairly new, appropriate methodologies for an investigation of multifaceted

aspects of second language acquisition are only partially available. One task in Year One of this study, therefore, was to assess existing instruments for their suitability and to develop new ones where necessary.

Development of Formal/Oral Test: Oral Grammar

Following from the theoretical discussion of possible differential effects of modality and purpose on type of language outcome, the achievement measures used in the present study had to represent combinations of these features. The criteria formal/written, functional/oral, and functional/written could be fulfilled by adapting standardized achievement tests (see section on Instruments). A test which focused on the form of the language involving the oral medium, i.e., a formal/oral test, did not, however, exist in any standardized form. Consequently, such a test had to be developed by the investigators. A task requiring the detection and identification of linguistic errors in oral sentences was considered to be an appropriate formal/oral test.

Previous research on productive competence in French of high school students (Swain, 1976; Naiman et al., 1978) had indicated that errors are frequently committed with certain verb forms, position of adjectives and direct/indirect pronouns. It was therefore decided to retain these areas of difficulty as error sources in the test sentences.

Before developing the test, the researchers ascertained that all grade 10 and 12 classes had been taught the respective rules governing the position of pronouns and adjectives, and basic verb forms, including formation of the 'passé composé' or perfect tense and the choice of the

auxiliaries 'être' or 'avoir' with different verbs.

Twenty-five sentences were composed, each 15 syllables long.[3] The first sentence was a practice example with an error in the position of the pronoun. Of the remaining 24 sentences, six were correct (sentence # 6, 9, 10, 13, 15, 22); six contained an error in the position of the direct or indirect pronoun (sentence #2, 5, 11, 14, 16, 21); six positioned the adjective incorrectly (sentence #3, 4, 17, 19, 20, 25); and six contained an error in the formation of the verb (sentence #7, 8, 12, 18, 23, 24). No sentence contained more than one error. Examples of the four conditions are as follows:

(1) Les enfants les regardent par la fenêtre après le déjeuner. (correct)

*(2) Il ne prend pas sa nouvelle voiture, mais laisse la au garage. (pronoun)

*(3) La bouteille de rouge vin que je t'ai donnée hier vient de France. (adjective)

*(4) Pendant la récréation, les amis nous avons chanté une chanson de Noël. (verb)

The sentences were put into random order and recorded on tape by a native speaker of French. Each sentence was read twice, followed by a 10 second pause for the student response. The test was preceded by taped instructions in English. It was explicitly stated that each of the sentences could either be correct, contain an error in the position of the adjective or pronoun, or a mistake in the formation of the verb. The students were told to decide which of these conditions applied to the sentence heard and enter their response on a coding sheet.

The purpose of this test was to direct the students to attend primarily to form rather than to meaning, thus exercising their 'Explicit Linguistic

Knowledge'. In some cases, however, problems such as those presented by these tests may be solved not by any consciously applied rule, but by some intuitive "feel" for the language (Krashen, 1976). These solutions would more likely rely on Implicit Linguistic Knowledge, and the learner would be less likely to successfully articulate the rule governing the response. To provide some control for the explicitness with which students identified the various errors, a measure of the Certainty of each response was added. It was assumed that if the response was based on a conscious and explicit rule, then the learner would be certain of its correctness. A response more nebulously derived would be associated with less certainty. Students indicated their certainty of each response by selecting one of the alternatives 'sure', 'unsure', or 'guessing'.

For purposes of scoring, the number of times an error was correctly identified was totalled, making possible a score of 6 for each of the four conditions. The Certainty responses were assigned values of 2 for 'sure', 1 for 'unsure' and 0 for 'guessing'. These scores were totalled for those trials in which the error was correctly identified and divided by the number correct in that condition to yield a Certainty score out of 2 for each of the four conditions.

Thus, for each student, four pairs of scores were calculated for each of the conditions. The first score refers to the number of times out of 6 the errors for each condition were correctly identified; the second score represents the average of the Certainty scores for each correct trial in that condition, calculated in the manner described above. For example, a student who had detected the pronoun error three times out of

a possible total of 6 and indicated that twice he was sure and once he was guessing would receive 3 for number correct and $\frac{2+2+1}{3} = 1.67$ for Certainty.

Results

Of the total sample, 147 students completed the Oral Grammar test. An analysis of variance of the independent factors school and grade and the four error conditions was performed on the data.

The results showed that the main effects of school and grade were both significant. These differences may be interpreted by the interaction between school and grade ($F(2,141) = 12.34$, $p < .001$). A Newman-Keuls analysis of the interaction indicated that of the six school and grade groups, only one, that is grade 12, School 1, performed differently from the rest of the sample. Scores for this one class were significantly higher than those in four of the other groups although the comparison of this groups with the fifth group, also a grade 12 class, did not achieve statistical significance. Discussions with the teacher of the superior group revealed that this was, in fact, an 'enriched' class comprised of the best French students at this grade level. No such streaming existed in the other two schools.

The difference between scores in the four conditions was significant ($F(3,423) = 14.78$, $p < .001$). The mean scores for each condition were:

Correct	3.04
Pronoun	2.69
Adjective	2.48
Verb	2.14

The relevant differences, according to a Newman-Keuls analysis, were that the Correct scores were highest ($p < .01$), Pronoun and Adjectives came

next ($p < .01$), and Verbs were most difficult ($p < .01$).

The differences between scores for Certainty in the four conditions followed exactly the same pattern as did that for Number correct ($F(3,423) = 4.10$, $p < .01$). Correlations between the Number correct and the Certainty showed a strong relationship for each of the categories. The correlation coefficients were as follows:

Correct:	$r = 0.41$ ($p < .001$)
Adjective:	$r = 0.53$ ($p < .001$)
Pronoun:	$r = 0.43$ ($p < .001$)
Verb:	$r = 0.48$ ($p < .001$)

Hence, responses were not random but related in some way to a measure of certainty. The two curves are plotted in Figure 2.

Discussion

The relationship obtained between Number correct and Certainty may be used to interpret the process by which the task was solved. If the items were solved by resorting to an explicit rule, then the Certainty of the response should be very high, approaching 2. If, however, implicit or unspecified knowledge was used, then the Certainty should be very low, as no justification for the response could be cited. Thus, the Certainty scale may be considered to represent a continuum of Explicit-Implicit Knowledge whereby higher scores indicate greater Explicit Knowledge while lower scores reflect use of Implicit Knowledge, or hunches. Returning then to the results of the Number correct, higher scores were obtained for those conditions in which the Certainty or use of Explicit Knowledge was greatest; performance was best for those categories which were solved primarily by means of Explicit Knowledge of the rules.

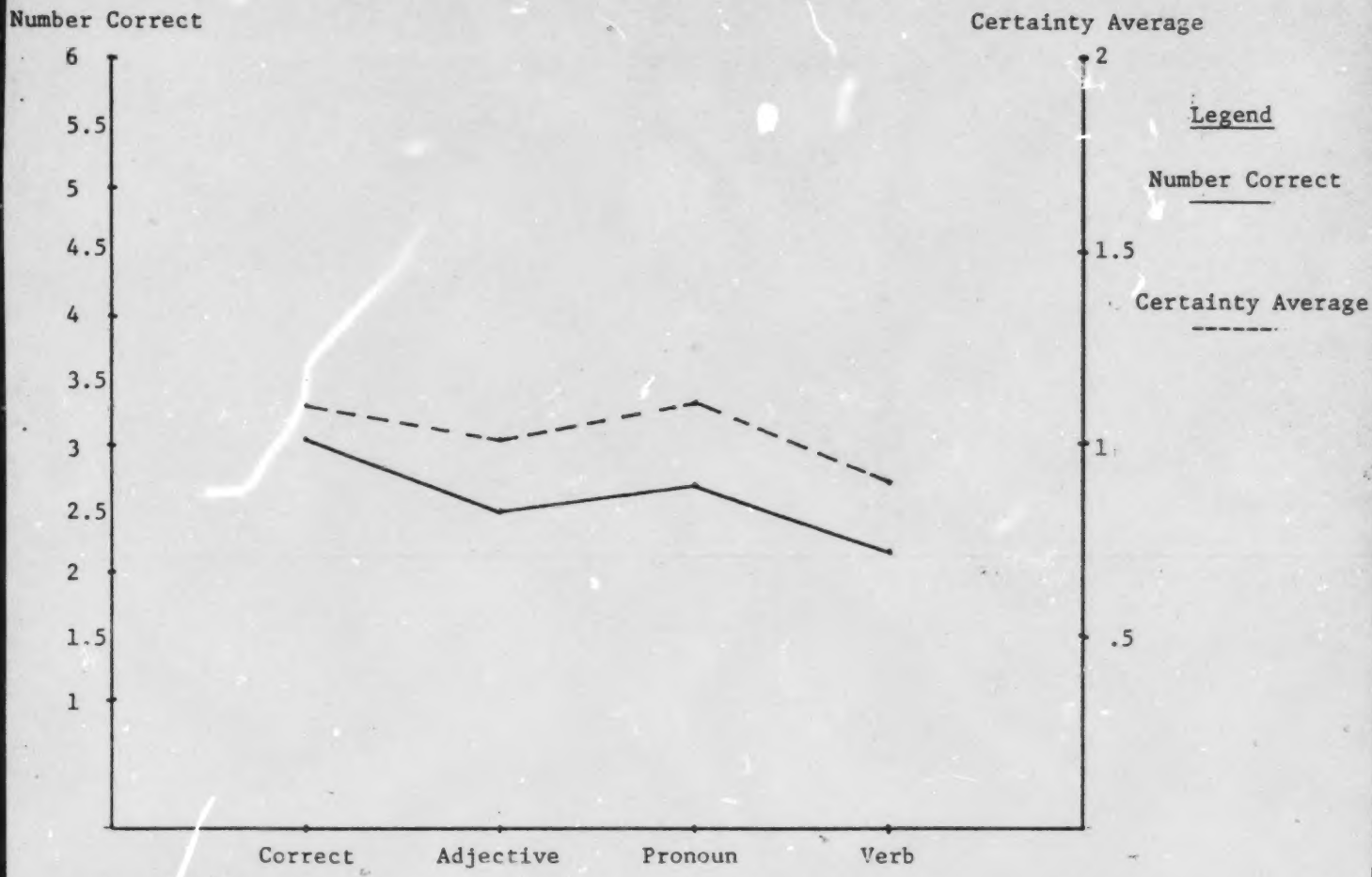

Figure 2. Results of Oral Grammar Test with Number Correct out of Total of 6 and Certainty Average out of Possible Total of 2.

Alterations in this task for future use may be devised to better differentiate the knowledge source as Explicit or Implicit. To bias the subject to use Explicit Knowledge, the task may require that, once the error type was identified, the governing rule must also be stated. To make the task more a product of Implicit Knowledge, spontaneous judgements of correct/incorrect without even the fourway classification existing in the present form may be elicited. The judgement may be determined more by the "sound" of the sentence than its consistency with known rules and thus constitutes a reflection of Implicit Linguistic Knowledge. Time constraints may be used to further bias the use of Implicit Knowledge. It would be interesting to determine if these Implicit/Explicit differences are reflected in the types of errors that may be detected. The differences obtained in the present data suggest the possibility that Pronoun rules are known explicitly while verb formations are implicitly derived.

Assessment of Learning Strategies

Learning strategies are defined as the learner's conscious approaches to the language learning task to improve competence in the language. In the present study, three learning strategies are elaborated - practising, monitoring and inferencing. It is hypothesized that the degree to which the strategies are used, the modality in which they are operating and the formal/functional purpose of the endeavour may have differential effects on various types of achievement. Therefore, an instrument assessing the

students' use of those strategies had to be developed. A written questionnaire consisting of closed questions appeared to be the most appropriate format, allowing for group administration, easy tabulation and subsequent statistical analyses.

Development of Questionnaire

Questions were designed to conform to an eight-cell matrix which comprised the theoretical framework of the learning strategies. Table 1 indicates the nature of the questions as well as the number of questions per cell that appeared on the questionnaire. The numbers in parentheses refer to the question number on the questionnaire.

The division of questions according to modality follows directly from the theoretical discussion of the effects of modality on the nature and acquisition of language. The empirical hypothesis is that strategies exercised for language of one type, such as oral language, may not have generalized facilitative effects for language learning of another type, such as written language. Thus, while practising reading may improve reading, it may be inconsequential to the development of writing abilities.

Division of the strategies according to purpose seemed less clear. While practice could certainly be undertaken for reasons of either language form or communication, the other two strategies appeared to be more tied to one of these purposes. Monitoring involves a modification and correction of language through explicit attention to form. Hence, although monitoring may well proceed in a communicative, or functional situation, it is essentially a formal activity since its purpose is to

TABLE 1

Design of Strategy Questionnaire

	Strategy			
Modality	Practising		Monitoring	Inferencing
	Formal	Functional		
Oral	2 (#8, #10)	2 (#7, #9)	1 (#11)	1 (#12)
Written	2 (#2, #4)	2 (#1, #3)	1 (#5)	1 (#6)

improve the structural aspects of the language. Similarly, inferencing basically has as its goal the ascertainment of meaning, even though the process of arriving at this meaning may rely on considering formal properties of the language. Inferencing, thus, is mainly a functional strategy. To the extent that these two strategies involve both formal and functional aspects of the language, these designations of monitoring as formal and inferencing as functional are considered to be only tendencies and not categorical classifications.

The questionnaire examined the language learner's use of these strategies by asking multiple choice questions for which quantitative assessments could be made. Functional written practice, for example, was assessed by asking subjects to indicate how often they read each of the following in French: (a) newspapers and magazines, (b) labels on packages, (c) books, or (d) brochures and pamphlets, or how often they wrote letters in French to pen-pals, short stories, descriptions, etc. Functional oral practice was indicated by the frequency with which students conversed in French with friends or native speakers and listened to various French sources out of interest in the content. Various examples of formal practice were given, such as writing out vocabulary lists, copying passages from a text, writing dictations, etc. Oral and written monitoring was measured by the degree to which subjects indicated an active attention to grammar and orthography in order to avoid or understand and correct errors. Finally, inferencing was assessed by examining various strategies employed by subjects upon encountering unknown words, sentences or passages when listening to French or reading it. Whereas

a non-inferencer may tune out completely when lacking aural comprehension or immediately consult a dictionary to determine word meaning when coming across an unknown word, an inferencer may first attempt to derive some meaning through the context, environmental cues, similarity with a known word, or some other means.

All responses were entered on a four-point scale indicating "often" "sometimes", "rarely" and "never". These categories were assigned values of 3, 2, 1, and 0 respectively. Thus higher scores indicated greater use of the strategy.

Scores for each student were calculated according to the design in Table 1. Thus in addition to the eight individual cell scores, there were cumulative scores for each of the modalities and each of the strategies.

The questionnaire was pilot-tested in one grade nine and one grade 10 class and subsequently revised for use in the main study.

Results of Strategy Questionnaire

The strategy questionnaire was completed by 152 students. The data were analyzed by analyses of variance with the following factors: school, grade and use of strategies. The dependent variable 'strategies' consisted of six repeated measures, i.e., practising, inferencing and monitoring for each of oral and written modalities.

The scores for each subject were calculated by expressing the number of points assigned for a particular cell as a proportion of the total possible for that cell. Thus each subject received six proportion scores

indicating the extent to which he used each strategy/modality type. These proportions were converted by arcsine transformation for the analysis of variance. All the mean scores reported for this analysis are in terms of these arcsine values and are out of a possible total of pi, or 3.14.

Although there was no signficant difference in the use of strategies between schools, the main effect of grade was significant ($F(1,146) = 4.82$, $p < .05$); specifically, grade 12 students were employing the three strategies more frequently than were those in grade 10. The scores obtained by each grade appear in Table 2.

The analysis revealed a significant interaction between school and grade ($F(2,146) = 4.19$, $p < .05$). The differences between the groups, however, were not sufficient to be detected by a Newman-Keuls analysis. The interaction obtained in the Anova may be attributed to the large variance component associated with the random factors of school and grade and does not, in fact, represent a real effect.

There was no significant difference between oral and written modalities.

Differences between the use of the three strategies were significant ($F(2,292) = 219.72$, $p < .001$).

The means for the three strategies also appear in Table 2. A Newman-Keuls analysis showed that monitoring and inferencing are employed more often than is practising ($p < .01$).

An interaction between strategies and modality ($F(2,292) = 5.81$, $p < .01$) showed a differentiation between modality for one of the strategies. Inferencing was engaged in more often for written material than for oral

TABLE 2

Mean Scores for Strategy Use by Grade
Out of Possible 3.14

	Strategy			
	Practising	Monitoring	Inferencing	Mean
Grade 10	1.39	2.09	2.04	1.84
Grade 12	1.50	2.14	2.23	1.96
Mean	1.44	2.11	2.13	

language ($p < .01$). These results are displayed in Figure 3.

Discussion

The results of the data obtained on the learning strategy questionnaire have implications for three purposes inherent in the initial development of the questionnaire. First, the strategies identified by the investigators are meaningful to second language learners and are, in fact, activities in which these learners engage. No student claimed that the alternatives expressed in the questionnaire referred to activities which they considered to be unreasonable or incomprehensible. Second, the questionnaire proved to be a viable means of assessing the extent to which students use these strategies. It was possible to arrive at quantitative measures of the use of each strategy by various students. Third, by analysing these quantitative scores, differences between the extent of use of the particular strategies became apparent. Thus, the strategy questionnaire proved to be a useful methodological instrument for examining aspects of second language learning.

The specific information obtained through the analysis of the results of the questionnaire can be interpreted in terms of the two factors - strategy and modality.

The strategy least employed by the students tested was practising, both for oral and written language; monitoring and inferencing occurred far more frequently. This may indicate that while the students tested would not consciously arrange for greater contact with the language, as required by the definition for practising, when exposure to the language

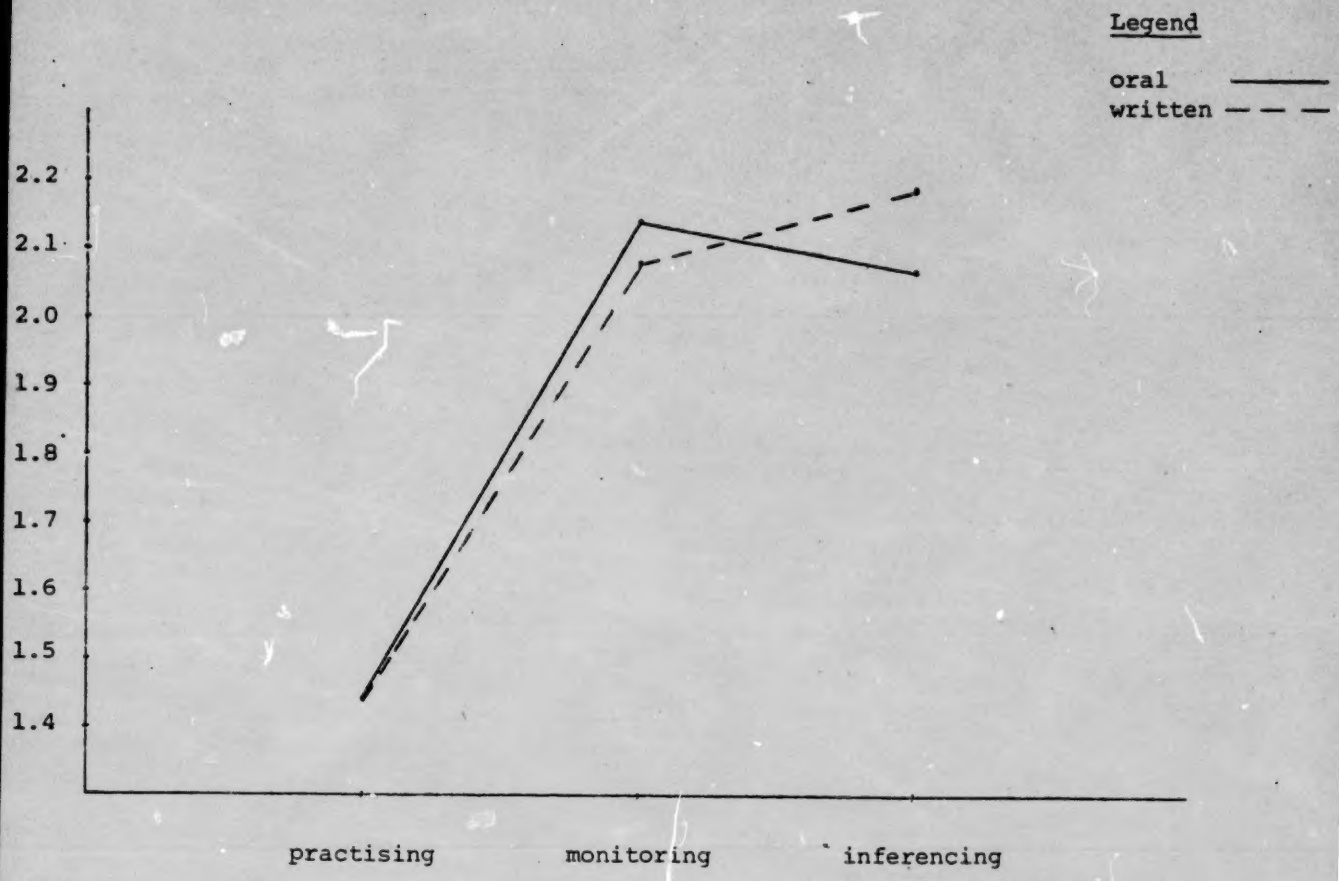

Figure 3. Interaction between Strategy and Modality Showing the Extent of Use of Each out of Possible Total of 3.14.

did occur, they nevertheless engaged in the other two strategies to exploit that contact more effectively.

The interaction between strategy and modality revealed that inferencing was employed more frequently with written material than with oral language. It may be useful to examine in future experiments the conditions under which certain types of inferencing can operate. For example, utilizing knowledge of other languages in order to derive word meanings could occur during both oral and written comprehension tasks, although written tests allow the learner more time to employ this particular type of inferencing. Inferencing by exploiting environmental or paralinguistic cues, on the other hand, facilitates only oral language comprehension in communicative situations.

Monitoring, although showing no significant effect, produced higher scores for oral than for written language. This may reflect that students are concerned with correctness when speaking, probably an effect of the teacher-student relationship in the classroom. This result would also explain the general observation that students are reticent to participate orally - they are afraid of making mistakes. It may have to be pointed out to students that monitoring in oral communicative situations can seriously impede communication.

On the basis of the information provided through the questionnaires, the interaction between strategies and modality may generally be interpreted as an association between reading and inferencing, and speaking and monitoring. That is, inferencing was used primarily with the functional task and monitoring was found to be more useful for the formal one. This

is consistent with the definition of these strategies. Since writing and listening were reported to occur very rarely, no comments can be made at this stage about the relation of these strategies to writing and listening.

Although showing a promising beginning, the learning strategy questionnaire still needs greater refinement. As the results of the present study have helped clarify the definitions for the strategies, these more precise definitions may also be used to improve as well the strategy questionnaire.

Analysis of Criterion Measures

The achievement measures employed in the present study consisted of four tests: a reading, listening and writing test, each of which was adapted from standardized measures, and an Oral Grammar test developed by the investigators and described above. The analysis of the data consisted of correlations between scores on the four tests and an analysis of variance to determine the relative achievement of subjects in the different measures. Such analyses may provide a means of assessing the validity of these various tests as indicated by intercorrelations for each student, as well as providing information about the areas of greatest achievement as given by the differences between scores on the four tests. Thus, it was considered methodologically useful to analyze these criterion scores in the absence of any experimental hypotheses or motivations. The correlation coefficients for the multiple correlations appear in Table 3. All the correlations are significant ($p < .001$).

TABLE 3

Intercorrelations of Criterion Measures

	Reading	Listening	Writing	Oral Grammar
Reading	1.00			
Listening	.65	1.00		
Writing	.72	.69	1.00	
Oral Grammar	.50	.67	.59	1.00

Results

The scores of the 130 students who completed all four tests were analyzed by an analysis of variance with the independent factors of school and grade. All scores were calculated as proportions of the possible total for each criterion and were subsequently converted by arcsine transformations for the analysis of variance. All reported means represent these arcsine values out of pi, or 3.14.

The analysis showed a significant interaction between the two independent factors, school and grade ($F(2,124) = 22.19$, $p < .001$)). The respective means are presented in Table 4.

As shown by a Newman-Keuls analysis, the scores of all three grade 10 classes are equivalent, whereas the grade 12 students of School I scored significantly higher ($p < .01$) than did their counterparts in School III. No significant difference was found between grades 12 or School I and II, and of School II and III. The significant differences can therefore be attributed to the high scores of the afore-mentioned grade 12 class of School I. This result is not surprising, since this particular grade 12 class was a so-called 'enriched' class with students of greater compentence in French. The same effect was found in the analysis of the scores on the Oral Grammar test.

The differences between scores on the four tests were significant ($F(3,372) = 84.72$, $p < .001$). The mean scores for each criterion measure per grade can be found in Table 5.

A comparison of the mean scores obtained on the achievement measures shows that the Reading test was easiest and the Writing test most difficult.

TABLE 4

Total Mean Scores of Criterion Measures By School and Grade Out Of 3.14

	School			
Grade	I	II	III	Grand Average
10	1.29	1.17	1.43	1.30
12	1.95	1.65	1.33	1.64
Grand Average	1.62	1.41	1.38	

TABLE 5

Mean Scores of Criterion Measures by Grade

Out of 3.14

Criterion Measures	Grade 10	Grade 12	Average
Reading	1.61	1.98	1.79
Listening	1.20	1.75	1.48
Oral Grammar	1.23	1.66	1.45
Writing	1.16	1.46	1.31
Average	1.30	1.71	1.00

For each grade, however, the degree of difficulty represented in this ordering varied. Whereas for the grade 12 students the Listening, Writing and Oral Grammar test presented equal difficulty, all three being more difficult than the Reading test ($p < .01$), for the grade 12 students more differentiation between scores was found. The Reading test was easier than Listening ($p < .01$), Listening was easier than Oral Grammar ($p < .05$), and Writing was the most difficult ($p < .01$).

Discussion

The correlation between the four criterion measures indicates that these tests are valid as a measure of students' general ability in French; differences found in the analysis of variance show that these students have achieved greater proficiency in some areas than in others. It is particularly encouraging that our own test (Oral Grammar) correlated as well with the standardized tests as they did with each other.

Generally, the Reading test was easiest and the Writing test most difficult. Although second language teaching usually emphasizes formal oral aspects of the second language, especially in younger grades, the students attained the highest scores on a functional written test. The explanation of this result may be twofold: (1) a functional test is probably more interesting and less artificial than is a formal test, since a coherent text provides a context and thread of thought; (2) a written text allows the student to ponder over it and exploit all possible clues; in other words, he has the opportunity to inference. The results of the inferencing aspect of the strategy questionnaire support this

second interpretation. Inferencing occurred significantly more often in relation with written texts than with oral material.

In contrast, the formal writing test, which consists of isolated sentences, can be considered to be rather boring, demanding a high level of attention and motivation. Although the written modality should have improved test scores by allowing the use of monitoring, the students apparently did not apply this strategy. Further, the poor performance on this test cannot be attributed to the novelty of the test items, since teachers verified their familiarity the students. The reason for the difficulty of this test is not clear, but is consistent with results reported by Barik, Swain and Gaudino (1976) in which performance on the I.E.A. Writing Test was found to be lower than that on the IEA Listening Comprehension and Reading tests.

FACTORS IN SECOND LANGUAGE LEARNING

The final concern with the Year One investigation was to examine empirically some of the factors proposed in the model to relate to second language learning. The study was conducted using the sample described above and assessed the role of the various factors identified in the model on achievement in various types of second language skills.

Predictions from the Model

The model of second language learning proposed in the present study

allows particular dynamics or processes to be specified as a function of given language tasks. Theoretically, four such tasks have been designated - formal/oral (Grammar Test), formal/written (Writing Test), functional/oral (Listening Test), functional/written (Reading Test), and the learning factors relevant to each may be predicted from the model.

A summary of the factors expected to relate to each of these tasks appears in Table 6. The use of the Strategies is believed to be most facilitative for the modality in which it is exercised. Thus, oral strategies are listed for oral tasks and written strategies for written ones. This prediction considers the three strategies as a group distinguished only by modality rather than specific strategy. The assumption is that general experience with language in a particular modality is most beneficial to that type of language.

Dichotomizing the tasks by purpose rather than modality does distinguish among the strategies. Practice may be used in either a formal or functional sense and so can be listed for both types of tasks. Formal practice, for example, studying, doing grammar exercises, or memorizing, should be most helpful for tasks which require explicit and detailed knowledge of the language form and grammar. Exposure to the language by means of movies, magazines, and other types of functional practice, should improve one's ability to use and understand the language for communication and meaning. Monitoring, as argued above, is primarily a formal strategy as it requires that the learner attend to the language code to correct and modify its structure. Inferencing, however, is most useful for extracting meaning from language samples and thus is predominantly a communica-

TABLE 6

Predictions of Relevant Factors on Four Types of Language Tasks

	Formal	Functional
Oral	Oral Strategies Formal Practice Monitoring Aptitude Field Independence	Oral Strategies Functional Practice Inferencing Attitude Field Independence
Written	Written Strategies Formal Practice Monitoring Aptitude	Written Strategies Functional Practice Inferencing Attitude

tion or functional strategy. Hence the strategies formal practice, functional practice, monitoring and inferencing are predicted to differentially facilitate formal and functional tasks.

Aptitude and attitude have both been shown to be involved in successful second language learning. Their specific effects, however, have recently been postulated by Krashen (1977). Krashen distinguishes two types of linguistic environments - learning and acquisition. In the former, such as the classroom, the learner's conscious knowledge of the target language is increased; in the latter, such as immersion in the L2 country, his unconscious competence and linguistic intuition are gradually increased. In this context, he suggests that aptitude is most important for formal language learning while attitude has its greatest effects on language acquisition. While all tasks in the present study represent instances of language learning rather than acquisition, they can nevertheless be scaled for the degree of learning involved. While the formal tasks are most rigorous in their demands for learned linguistic knowledge, the functional tasks better approximate an acquisition situation. Information not explicitly learned may be useful in solving these problems involving communication and meaning. Thus Aptitude should be a better predictor for formal tasks and Attitude for functional ones.

The final factor measured in the study, Field Independence, has been shown in various studies to relate to second language learning. In the study by Naiman et al.(1978), it was found to relate to oral tasks and hence is included among the predictors for oral language tasks in the present study.

Data Analyses

The analyses of data consisted of a series of stepwise regression analyses on the four criterion measures. The independent variables in the study were calculated as scores on four factors - Aptitude, Strategies, Attitude, and Field Independence. The initial analyses considered the effects of these four factors on achievement. In addition, the components of the first three factors may be considered separately. Thus, Aptitude is analysed in terms of words in sentences, spelling, paired associates, strategies in terms of practising, monitoring, inferencing, and attitude in terms of motivation, integrative orientation and evaluation of learning situation.

The achievement measures were the four criterion tasks discussed above (see Methodological Developments). These tests were Reading (functional/written), Listening (functional/oral), Writing (formal/written), and Grammar (formal/oral).

Factors in Achievement

A summary of the relationships found to exist between the factors and their effects on achievement is illustrated in Figure 4. The pattern diagrammed in this model obtains for both grades studied and for all four criterion tasks. Solid lines represent strong relationships while dotted lines are used for weaker effects.

Multiple correlational analysis of the four factors reveals that

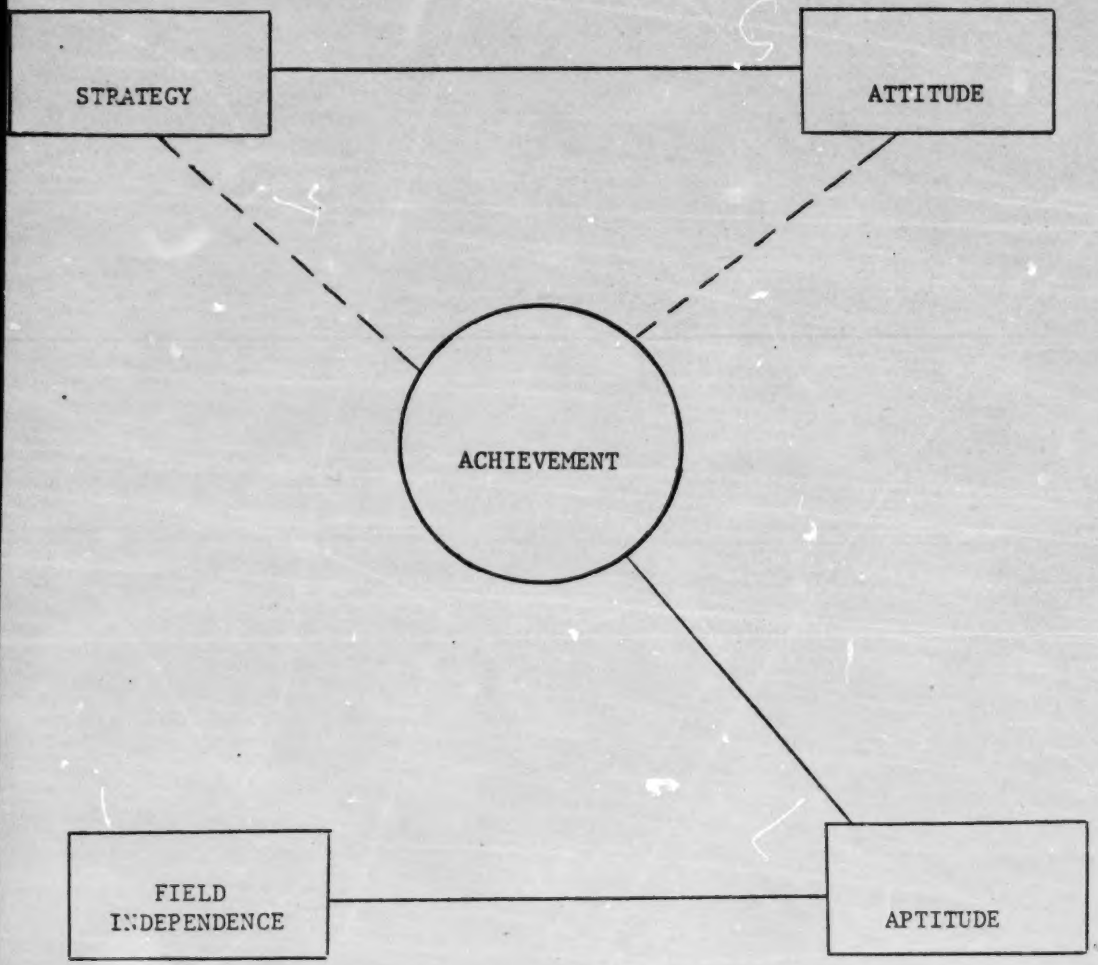

Figure 4. Relationship Between Factors And Achievement.

these may be considered as two pairs of related factors - Attitude/Strategy and Aptitude/Field Independence. While the Attitude/Strategy pair shows no correlation with Aptitude, its relation to Field Independence reveals a negative trend. The correlation coefficients are reported in Table 7.

The regression analyses of these factors on achievement were conducted separately for each grade as well as for the whole sample. Comparing the results of the two grades, no difference was found between the grades in terms of the effects of the factors on achievement (Reading: $F(5,124) = 0.51$, n.s.; Listening: $F(5,120) = 0.77$, n.s.; Writing: $F(5,121) = 0.04$, n.s.; Grammar: $F(5,118) = 0.28$, n.s.). Thus the pattern of relevant factors is the same for both grades and the model displayed in Figure 4 is a summary of all the data.

The effects of the factors on the four criterion tests are reported in Table 8. These figures are taken from the stepwise regression analyses and represent the per cent of the variance accounted for by each factor when the four together are used as a prediction. Thus correlations between factors are partialled out and the result represents only the portion of the variance uniquely attributed to each factor.

The two factors consistently accounting for achievement on all tests are Aptitude and Strategies. Attitude shows some positive relationships, especially in Grade 10, while Field Independence proves to be an extremely poor predictor of success.

The model in Figure 4 depicts Strategies and Attitude each contributing significant but small proportions to the explanation of variance in achievement. The regression results for Strategies show that in three of

TABLE 7

Correlations Between Factors

	Aptitude	Strategy	Attitude	Field Independence
Aptitude	1.00	-	-	-
Strategy	-0.05	1.00	-	-
Attitude	0.10	0.66**	1.00	-
Field Independence	0.43**	-0.16	-0.18	1.00

*$p < .05$

**$p < .01$

TABLE 8

Regression of Factors

	Reading			Listening			Writing			Grammar		
Factor	Grade 10	Grade 12	Whole Sample	Grade 10	Grade 12	Whole Sample	Grade 10	Grade 12	Whole Sample	Grade 10	Grade 12	Whole Sample
Aptitude	1.88[1]*	27.40**	31.76**	12.93	10.63	22.12**	4.79	28.44**	25.44**	0.22	7.05	14.63*
Strategies	4.10	0.34	5.98**	10.91	0.02	5.41**	0.21	0.04	0.53	0.40	0.44	4.76*
Attitude	16.67	1.87	0.08	9.91	5.77	0.73	19.02*	4.23	6.50*	2.93	5.34	0.29
Field Independence	5.91	1.99	1.72	——	2.36	0.08	2.43	0.02	0.96	0.63	0.03	0.00

1 Figures refer to per cent of variance attributed to that factor
* $p < .05$
** $p < .01$

the four achievement measures, this factor indeed accounted for a significant portion of the variance (see Table 8). The results for the separate grades, however, shows a tendency for a stronger effect to exist in Grade 10 than in Grade 12. A detailed analysis of strategies (reported below), however, shows this not to be the case. It will be argued that the summary score for Strategy is misleading in Grade 12 because effects which operate in opposite directions are summed and consequently negate each other. Thus, the model maintains that for both grades, Strategies is an effective predictor of success.

Attitude shows a significant effect only for the Writing test. For all other tests, however, there is a consistent tendency for a portion of the variance to be positively associated with Attitude. The tendency appears stronger in Grade 10 than in Grade 12, but the overall effect is considered sufficient to be represented in Figure 4 by a dotted line.

Field Independence never attains significance and never distinguishes itself as a critical factor.

An examination of the components of each factor is necessary to understand more precisely the particular effect each factor has on achievement and the ways in which the four tasks may be discriminated in terms of these factors.

Aptitude

Aptitude consistently accounted for the largest portion of the variance in achievement, and was slightly more important in Grade 12 than it was in Grade 10 (Table 8). This is consistent with the results of Gardner,

Smythe, Clément & Gliksman (1976) in which aptitude was found to be more strongly correlated with achievement in higher grades. Nevertheless, all tasks in the present study showed a strong reliance on language aptitude for good performance.

Although performance on the three aspects of the aptitude test showed high internal consistency, as demonstrated by the strong correlations between them (Table 9), the skills being evaluated by three test components were differentially related to performance on the criterion tasks. Thus students displayed a general language learning aptitude that was consistent across all three aspects of the aptitude test, but certain abilities assessed on the aptitude test were shown to be specifically required by particular types of language tasks.

Table 10 reports results of the regression analysis of the aptitude components on each criterion task. For the reading, writing, and grammar tests, the most important aspect of the aptitude test was words in sentences, a measure of grammatical sensitivity. For the listening task, however, achievement was best predicted by performance on the spelling component. The paired associates test was unrelated to achievement on the criterion measures.

The test for grammatical sensitivity assesses the "ability to understand the function of words and phrases in sentences" (Carroll and Sapon, 1958) and should be most importantfor tasks requiring explicit linguistic knowledge. The criterion tasks predicted to be most dependent upon such knowledge were first, the writing test, in which students are required to produce written responses which honour particular grammatical rules, and second,

TABLE 9

Correlations Between Aptitude Components

	Words in Sentences	Spelling	Paired Associates
Words in Sentences	1.00	-	-
Spelling	0.45**	1.00	-
Paired Associates	0.47**	0.35**	1.00

TABLE 10

Regression of Aptitude Components on Achievement

	Reading	Listening	Writing	Grammar
Words in Sentences	27.99**	5.80**	29.02**	12.50*
Spelling	6.77**	22.32**	0.70	3.52
Paired Associates	0.02	0.06	0.13	0.16

*$p < .05$

** $p < .01$

the oral grammar test in which formal rules are explicitly required to locate the error. The reading and the listening tasks exploit grammatical knowledge to a far lesser extent than do the other two tasks. Although grammar is necessary to interpret meaning, explicit knowledge of formal structures is not as essential for a reading or listening comprehension task as it would be for a grammatical production task, such as the writing test.

The results of the regression analysis indicating the proportion of variance accounted for by words in sentences on each of the tests basically confirm this prediction. Writing is most dependent on grammatical sensitivity and listening the least. Reading comprehension, however, is more contingent upon grammatical knowledge than was predicted by this explanation.

The spelling section of the aptitude test provides students with an incorrectly spelled word from which they must derive meaning. Thus it is a measure of how meaning may be assigned on the basis of sound cues only. Gardner and Lambert (1972) argue as well that the spelling test is not a test of verbal ability, as traditionally believed, rather a "test of inferring meaning from relatively complex material" (p. 291).

The test showing the greatest dependence on the spelling component was the listening task. In this test, oral passages were interpreted - that is, meaning had to be assigned on the basis of sounds. Thus this analysis of the components of the aptitude test is consistent with the results which show that the listening task is best predicted by the spelling test with less dependence on words in sentences while the other

three criterion tasks show the opposite effect. The reading and grammar tasks both bear some relation to spelling and this is interpretable as well in terms of the present analysis. Reading probably requires an intermediate step in which the words on the page are converted to sounds, and grammar, an oral test, presented the information only through sounds. Only the writing test, a strictly formal grammatical test, showed no relationship to performance on the spelling test.

Strategies

The strategies may be considered in terms of two sets of components - one relating to purpose, that is, formal practice, functional practice, monitoring, inferencing, and one relating to modality, that is, oral and written strategies.

The results of the regression analyses for purpose components are presented in Table 11. These results may be used to interpret the effect obtained for the factor strategies where the score was assessed as the sum of the components. Whereas in Grade 10 each strategy contributes some small but positive amount to the achievement scores, in Grade 12 the strategies differentiate themselves, one, in fact, contributing negatively to the explanation of the variance. Thus in Grade 10 greater overall use of the strategies is associated with achievement, while in Grade 12 the effects of the various strategies are more specialized.

It is important to note that while the effects of the strategies on achievement become differentiated in Grade 12, the internal relationships between the strategies remain identical in both grades. A comparison of

TABLE 11

Regression of Strategies by Purpose on Achievement

	Reading			Listening			Writing			Grammar		
Formal	Grade 10	Grade 12	Whole Sample	Grade 10	Grade 12	Whole Sample	Grade 10	Grade 12	Whole Sample	Grade 10	Grade 12	Whole Sample
Functional Practice	9.35*	7.53*	8.07**	9.98	6.06**	9.45**	2.32	5.72**	7.10**	0.08	10.08**	6.74**
Formal Practice	1.25	-2.69*	-3.21**	0.38	-5.93**	-2.58*	0.22	-5.98**	-2.75*	0.16	-4.88**	-3.13**
Monitoring	3.98	5.86*	4.01	0.15	8.31**	1.97	7.12	4.65	2.68	2.44	9.44**	4.10*
Inferencing	0.27	——	0.84	0.69	0.13	0.71	——	0.90	0.68	——	0.79	0.03

* $p < .05$
** $p < .01$

each correlation for the two grades showed no significant differences between grades.

The correlation coefficients for the four strategies according to purpose are reported in Table 12. While all strategies are related to each other in terms of usage, the highest correlation was obtained for formal and functional practice. That is, students are more likely to engage in both forms of practice to the same extent than they are to pursue one in exclusion of the other. Similarly, monitoring and inferencing were found to be highly related. Formal practice is associated with both monitoring and inferencing, but functional practice is more closely associated with inferencing, the other functional strategy, than it is with monitoring.

Returning to the effects of these strategies on achievement, it can be seen in Table 11 that in general the two forms of practising are more critical than are monitoring or inferencing. The results of the analysis of variance for strategy use, however, indicated that there was a significant difference in the extent to which students engaged in these strategies. Whereas students reported great use of monitoring and inferencing, far less use was made of practice (see Results section of Strategy Questionnaire). The results of the regression analyses suggest that time would be more profitably spent in practice than in the other two strategies.

The strategy most responsible for achievement on all tasks is functional practice. Although it was expected that the effects would be more pronounced for functional tasks, the results show that functional practice facilitates performance on all four tasks examined. General exposure

TABLE 12

Correlation Between Strategies

	Functional Practice	Formal Practice	Monitoring	Inferencing
Functional Practice	1.00	-	-	-
Formal Practice	0.73**	1.00	-	-
Monitoring	0.16**	0.29**	1.00	-
Inferencing	0.25**	0.34**	0.43**	1.00

* $p < .05$

** $p < .01$

the language in communicative situations is therefore relevant to performance requiring attention to either meaning or form. Further, as with all the strategies, usage makes a greater difference to achievement in Grade 12 than in Grade 10.

Formal practice revealed an interesting relationship with achievement. Whereas no significant effects were obtained for Grade 10, a significant but negative portion of the variance was attributed to formal practice in Grade 12. That is, high achievers in Grade 12 were those students who engaged in the least amount of formal practice. We interpret this result to mean that high achievers required less formal practice than did low achievers who needed to work harder to maintain their level of proficiency. After a certain point, however, the additional time spent in formal practice did not improve the student's level of competence. This is represented in the analysis by a negative regression coefficient. Further, this explanation implies that the students in Grade 12 were sensitive to the amount of formal practice necessary for their achievement, although unaware that the additional practice undertaken by the low achievers was no longer improving performance.

Neither formal nor functional practice differentiated the four tasks in terms of their formal or functional requirements. That is, formal practice was not particularly facilitative for formal tasks nor was functional practice for communicative ones. Rather, functional practice was generally essential for achievement on all tasks; formal practice was effective to a limited extent after which no further improvement in achievement followed.

Monitoring, although showing a consistently positive effect in

Grade 10, becomes increasingly important in Grade 12. For three of the four achievement tests, the proportion of the variance accounted for by monitoring in Grade 12 is significant (See Table 11). In Grade 10, three of the tasks show a large, although not significant, dependence upon monitoring. The strategy, therefore, is an effective means of increasing proficiency.

According to Krashen (1976), monitoring may occur under two conditions - a requirement for attention to form and sufficient operating time. Considering the four tasks in terms of these criteria, it may be seen that the writing task meets both conditions of form and time, grammar requires attention to form but relatively little time is provided, reading allows sufficient time, and listening meets neither criterion. Thus, monitoring should be most beneficial to the writing task in which both conditions are met, secondarily to the reading and grammar tasks, each of which meets one condition, and minimally relevant to the listening task where neither condition is satisfied. Further, if the condition of form is most important, then monitoring would be more facilitative for grammar than for reading; if time were more important, monitoring would be more effective for reading than for grammar.

Ordering the tasks for their dependence on monitoring according to the results of the regression analysis of the whole sample reported in Table 11, a particular order of importance emerges. Large effects were obtained for the grammar and reading tasks, tasks each conforming to one of the monitoring requirements. The effect was significant, however, only for the grammar task, possibly indicating a greater importance for

attention to form than for sufficient time. As predicted as well, the listening task was not greatly affected by monitoring in the results for the whole sample. The writing task, however, was anomolous in terms of the predictions. Since both criteria are met by this task, a large effect was expected. The effect observed, however, was positive, but not sufficiently large to achieve statistical significance.

The amount of inferencing reported by students on the questionnaire had almost no effect on achievement. It is possible that the inferencing strategy is reserved for contextual situations in which it is necessary to ascertain only the gist of a difficult utterance. None of the criterion tasks approximated that degree of functionality in that a formal component was always involved. Alternatively, however, it may be that the questionnaire provided an inadequate assessment of inferencing. In this case, no claim may be made about the role of inferencing - it neither discriminated among the criterion tasks nor facilitated general performance. To decide between these alternatives a better instrument for measuring inferencing and a task placing greater stress on general communicative meaning need to be developed.

The strategies may be considered as well in terms of the modality in which they are exercised. The design of the questionnaire allowed for scores to be calculated for oral and written use of the strategies irrespective of the particular strategy involved. The results of the regression analysis of these scores appear in Table 13.

The results of this analysis indicate that the effects of strategy are restricted to the modality involved. For listening and grammar, both

TABLE 13

Regression of Strategies on Achievement by Modality

	Reading	Listening	Writing	Grammar
Oral	0.10	5.58	0.35	4.20
Written	6.13	0.33	0.72	0.40

oral tasks, oral strategies are related to achievement. Reading, a written task, is affected by the use of written strategies. The writing task, however, is anomolous. Neither oral nor written strategies facilitated performance on this task. Recall that monitoring similarly showed a weaker effect on the writing task than that predicted by the hypotheses. Possibly the writing task was too difficult for any of the strategies to be effective in improving performance.

Achievement in the four tasks may thus be differentially related to the use of the various strategies. The effects were emphasized in Grade 12 and were more specialized than they were in Grade 10. The strategies in general operate by relating information in the various knowledge sources, and possibly, the more information available, the more effective are the strategies. Formal practice, however, serves primarily to build up Explicit Linguistic Knowledge and if performance proceeds largely through Implicit Linguistic Knowledge, then there would be a diminishing return on elaborating the Explicit source. This may account for the reverse effect of formal practice observed in Grade 12.

Attitude

As shown in the model (Figure 4), students' attitude as measured by Gardner's instrument is considered to have some modifying effect on achievement. The effect may actually be indirect - a good attitude is associated with greater use of the learning strategies and these have been shown to account for significant portions of the variance in achievement.

The three components of the attitude scale - motivational intensity,

evaluation of the learning situation, and integrative orientation, were found to be highly correlated for each student. The correlation coeficients are presented in Table 14. All correlations were significant, and it is justifiable, therefore, to summarize the three scores to obtain a general indication of the extent to which a particular student may be characterized as having a positive or negative attitude.

As with the previous two factors discussed, in spite of a high correlation between components, the components, nevertheless, are differentially related to achievement. The results of the regression analysis describing these differences are presented in Table 15.

The most critical component of the attitude factor in terms of its effects on achievement is motivational intensity. A significant portion of the variance in achievement is attributed to this component in three of the four criterion tasks. Only the listening task shows little or no dependence on attitudinal characteristics of students, yet even in this case motivational intensity is the most important of the three components.

Evaluation of the learning situation reveals a smaller yet consistent relationship to achievement although it does not systematically relate to achievement on particular kinds of tests. The two criterion measures exhibiting the greatest dependence on evaluation are reading, which is functional/written, and grammar, which is formal/oral. Further, the reading task is similar to classroom activities while the grammar task is not, thus precluding the possibility that familiarity is the determiner. A reasonable interpretation of the results would seem to be that a good evaluation of the learning situation contributes in a small unspecialized

TABLE 14

Correlations Between Aptitude Components

	Motivation	Evaluation of Situation	Integrative Orientation
Motivation	1.00	-	-
Evaluation of learning situation	0.54**	1.00	-
Integrative Orientation	0.62**	0.37**	1.00

* $p < .05$

** $p < .01$

TABLE 15

Regression of Attitude Components on Achievement

	Reading			Listening			Writing			Grammar		
	Grade 10	Grade 12	Whole Sample	Grade 10	Grade 12	Whole Sample	Grade 10	Grade 12	Whole Sample	Grade 10	Grade 12	Whole Sample
Motivation	19.01**	3.00*	6.82**	15.85*	6.69	3.51	24.19**	8.50**	15.29**	2.34	8.17*	2.81*
Evaluation	0.39	3.23	2.82*	0.35	0.32	1.57	0.56	5.86*	1.39	0.64	1.06	2.66**
Integration Orientation	0.22	-	0.02	0.24	0.29	0.54	0.01	0.02	0.05	0.08	0.14	0.04

* $p < .05$

** $p < .01$

way to achievement in all tasks.

The effect of integrative orientation on achievement was negligible. This result is not surprising when one considers what is being measured by this component. A desire to "integrate" into the culture and assimilate linguistically to a target group is probably not relevant for a classroom situation where the language is taught as a subject and achievement is measured by test scores (Burstall et al., 1974). Success in this context is dependent upon learning particular formal aspects of the language and displaying one's mastery of these rules on stylized tests. The effects of this component may, however, emerge indirectly. An integrative orientation may inspire greater motivational intensity, a component which does relate significantly to classroom achievement. Indeed, the correlation between these components was very high ($r = 0.62$, $p < .001$). Thus, integrative orientation may affect achievement in classroom situations although through indirect means.

The task most influenced by the attitude measures was writing. The most distinguishing feature of the writing task is that it is most similar to the activities performed by the students in their language classroom. In this sense it may be that success in classroom-type tasks is associated with a high degree of motivation.

The predicted effect of attitude was that it would relate primarily to tasks relying on "acquisition" and less to those requiring "learning". In our design, the "acquisition" tasks were the functional ones. Not only was this differentiation not obtained, but the task most influenced by attitude was the task considered to involve the most learning, that is,

the formal/written task. It is possible that none of the tasks closely enough approximated an "acquisition" situation since all occurred within the formal constraints of the classroom. A greater effect may be found on tasks of a different nature - perhaps communication in a natural or simulated situation.

Field Independence

In none of the tasks was field independence found to be significantly related to achievement. The factor was however, positively correlated with aptitude ($r = 0.43$, $p < 001$), and aptitude consistently accounted for large portions of the variance. As this replicates a previous result in which field independence was not responsible for achievement (Bialystok & Fröhlich, 1977), we consider this factor not to have an integral part in second language learning.

Discussion

Of the four factors examined for their effects on second language achievement, three proved to be critical for some types of performance tasks; only field independence was unrelated to success.

The four achievement tasks did not differentiate themselves to the expected extent regarding the relevant predictors. Possibly, all being school tasks administered under particular conditions, differences between them were minimized. Sufficient differences did emerge, however, to support the contention that the parameters of modality and purpose used to

characterize the tasks are meaningful. Further refinement to these categories is necessary.

Although it was predicted that aptitude would determine performance on formal tasks and attitude on functional ones, it was found that aptitude was related to all measures of achievement while the effects of attitude were small. In fact, the only significant attitude effect was for Writing, a formal task. In Grade 10, attitude did account for a considerable amount of the variance on the two functional tasks. It must be noted, however, that no task in the study was truly functional. Students were concerned with getting the correct answers, primarily a formal characteristic.

The strategies proved to be important predictors of achievement for certain tasks and at certain grade levels. Whereas each strategy contributed a small positive amount to proficiency in Grade 10, differences between the strategies became evident in Grade 12. The major difference was the effect of formal practice. The data revealed a "ceiling effect" after which additional formal practice no longer enhanced achievement, and the surplus formal practice appeared in the analysis as a negative regression coefficient.

Functional practice was the single most beneficial strategy. Communicative exposure to the language improved performance on all tasks measured, both formal and functional.

Monitoring showed positive effects for Grade 12 but was less effective for the Grade 10 students. It is reasonable that some particular amount of knowledge is required for successful monitoring.

Finally, strategies practised in the oral or written modality

facilitated performance in the modality exercised. Little transfer was observed.

The four factors - Aptitude, Attitude, Field Independence and Strategies, have thus been shown to have different quantitative relationships to achievement, explaining differences between learners, as well as quantitative relationships to proficiency, explaining differences between tasks.

IMPLICATIONS AND CONCLUSIONS

Revision of the Model

The data obtained from the present study suggest two revisions that should be made to the theoretical model of second language learning. The revised model is presented in Figure 5.

The first change in the model occurs at the level Input. The original dichotomy between formal instruction and functional exposure proved to be too limiting. Since most instructional situations contain both formal and functional aspects, the distinction is not meaningful. Moreover, the generalized effects observed for functional practice indicate that the reason for exposure to the language is not relevant; exposure in general increases all aspects of language competence. Thus, Input has been represented as a global concept called "Language Exposure".

Within the general framework of Language Exposure, it is possible to isolate particular language experiences. One such experience is that obtained in the Language Classroom. Others may be exposure through books,

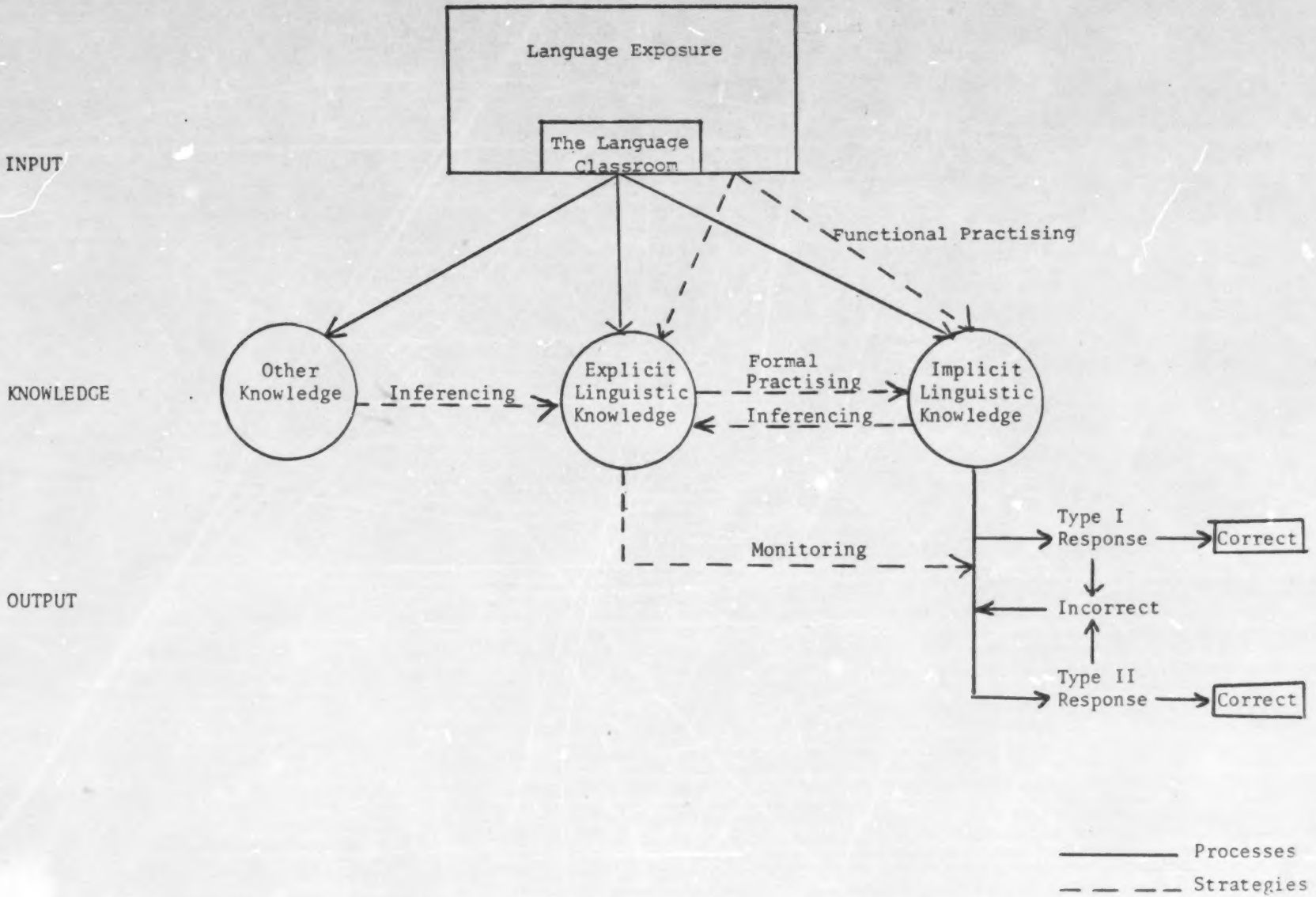

Figure 5. Revised Model of Second Language Learning

movies, travels and so on. The Language Classroom is assumed to impart information to all three knowledge sources. Explicit Knowledge is the formal rules learned in the classroom; Implicit Knowledge is gained through hearing the language spoken in the class; Other Knowledge is any other information - cultural, historical, etc., that is learned in the language classroom.

The second revision emerges from the finding that formal and functional practice are actually different strategies and have different effects on achievement. The original depiction of practising as the transfer of information from Explicit to Implicit Knowledge is now considered to represent only formal practice. Conscious rules may be made "automatic" through study and exercise. Functional practice, however, refers to the extent to which language exposure occurs in addition to classroom encounters. Thus, sampling the language outside the classroom is the source of functional practice. The facilitative effects on achievement as a consequence of this exposure are for both Explicit and Implicit Knowledge. Greater functional practice improved performance on both formal and functional tasks in the present study.

Pedagogical Implications

The results of Year One of the Learning Study point to several pedagogical implications for the second language teacher. Of all the factors examined, aptitude and strategies proved to be the most important variables affecting achievement in the second language. Whereas aptitude is most

likely an inherent learner characteristic, which may be less modifiable through conscious efforts by the learner, strategies promise to be amenable to instruction.

Of particular interest is that functional practice has an overall positive effect on achievement; it increases not only communicative competence but also formal knowledge of the language. It may therefore be advisable to encourage students to undertake communicative activities inside and outside the classroom and to increase the incidents of functional (communicative) exposure to the target language as much as is possible within the limitations of the classroom, for example, through videotapes, films, radio programs, records, conversations, etc.

That the students may be very concerned with correctness when speaking has been indicated by the questionnaire results on the use of monitoring. It must be emphasized that not all the strategies are equally appropriate for all learning situations and at all levels of learning. Whereas monitoring may improve performance on written tasks, it may impede oral communication.

Inferencing, the third strategy, had only minimal effects on achievement. Since this result may have been caused by insensitivity of the questionnaire, hypotheses concerning the relevance of inferencing to achievement are still tentative. Evidence for the facilitative effects of inferencing has been reported (Carton, 1971; Fröhlich, 1976; Bialystok and Fröhlich, 1977) and the issue warrants further investigation.

The results of the present study in conjunction with other evidence

in the literature (Rubin, 1975; Stern, 1975; Fröhlich, 1976; Naiman et al., 1978) suggest the potential importance of learning strategies as a factor in second language learning. Further research examining the nature of these strategies and the precise effects they have on proficiency needs to be undertaken.

Suggestions for Future Research

Several suggestions for future research have been indicated in the various discussion sections of the results. Since use of the learning strategies proved to be an important factor in achievement, further investigation of their effects is planned. It is specifically intended to examine more directly the effect of inferencing, including more precise conceptualization of this strategy and a more sensitive measure of its use.

Further, since all achievement measures employed in Year One of this study were mainly tes of language comprehension, the role of production in the model still requires exploration. It may be that different learner factors from those found for comprehension may account for productive proficiency.

The selection of measures of productive competence should further reflect the formal/functional distinction in a more precise way than had been done in the present study to better understand the differences in achievement on these two kinds of tasks.

Another aspect of the model which will have to be investigated is

the relationship between input and knowledge sources; in other words, what are the processes involved in the elaboration of the knowledge sources described in the model. In addition the utilization of particular knowledge sources for various response types at the output level needs examination.

In sum, although a few aspects of the proposed model of second language learning have been confirmed by empirical data, more research is needed in order to assess the degree to which the model may approximate the second language learning process.

NOTES

1 For a detailed description of the model, see Bialystok, E. and Fröhlich, M. Aspects of second language learning in classroom settings. Working Papers on Bilingualism, 1977, 13, 1-26.
And Bialystok, E. A Theoretical Model of Second Language Learning. (in preparation).

2 In this context, the difference between second or foreign language was neglected.

3 Some of the sentences were adopted from the imitation task used in the study by Naiman et al., 1978. For the complete set of sentences of the Oral Grammar test, see Appendix 1.

4 For the complete questionnaire, see Appendix 2.

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APPENDIX 1

Or 1 Grammar Test

ORAL GRAMMAR TEST

INSTRUCTIONS

You are going to hear some sentences in French and will have to decide if each sentence is correct or if it contains an error. Each sentence will be read twice, and no sentence will contain more than one error. The error will be one of three types. First, it could be an adjective error, that is, the adjective has been placed in the wrong position. In this case, circle the letter "A" for adjective on your answer sheet. Second, the error could be that a pronoun, such as "le", "la", or "les", and so on, was placed in the wrong position. For these errors you would circle "P" for pronoun. The third error could be a mistake in forming the verb. These will be marked as "V" for verb on your answer sheet. Finally, if a sentence has no errors, you would circle "C" for correct.

Once you have selected your answer, you are to indicate how certain you are that it is the right one. If you are sure about your answer, circle "S" for sure. If you have some doubt, or are not quite certain, circle "U" for unsure. If you are guessing or have only a vague idea about the answer, circle "G" for guessing.

Let us do a practice example. Listen to the first sentence and mark your answer beside number 1 on your answer sheet.

"Il ne prend pas sa nouvelle voiture, mais laisse
la au garage".

ALLOW DELAY

The error is that the pronoun "la" is in the wrong place. Therefore, you should have circled P for Pronoun on your answer sheet, as well as one of the choices indicating your certainty.

You will now hear the rest of the sentences.

ORAL SENTENCES - CORRECT

1. Il ne prend pas sa nouvelle voiture, mais la laisse au garage.
2. Ton papa lui a demandé une pomme verte et il l'a mangée.
3. Je t'ai vu avec ton ami François qui a un chien brun.
4. Elle le met dans son grand sac noir avant de prendre l'autobus.
5. Vous les donnez à André pour manger près de la maison.
6. Les enfants les regardent par la fenêtre après le déjeuner.
7. J'ai acheté les bottes que tu m'as montrées dans le magasin.
8. Nous nous amusons avec nos amis qui sont venus hier.
9. C'est Jacques qui a vu cette annonce dans le journal hier soir.
10. Hier quelqu'un nous a raconté l'histoire du petit Indien.
11. Il a écrit une longue lettre mais il ne l'a pas envoyée.
12. Pendant la récréation les amis nous ont chanté une chanson de Noël.
13. Ils les ont enlevés puis ils les ont mis à côté de la porte.
14. Alain lance son ballon à Henri mais il ne l'attrape pas.
15. Maintenant, je leur montre des images qui sont dans le grand livre bleu.
16. Michel a perdu les dollars que son père lui a donnés.
17. La bouteille de vin rouge que je t'ai donnée hier vient de France.
18. Le grand méchant loup a mangé la petite poule blanche de mon frère.
19. La maman de mon ami m'a donné son beau manteau rouge.
20. Le gentil professeur leur demande de finir la dictée.
21. Elle leur a lu les histoires du prince mais ils ne les aiment pas.
22. Ce détail que je n'ai pas remarqué est très important.
23. Elle s'est arrêtée chez le dentiste après la dernière classe.
24. Nous avons acheté une grosse citrouille que nous avons mangée.
25. Ce matin ils se sont levés de bonne heure pour étudier.

ORAL SENTENCES - INCORRECT

1. Il ne prend pas sa nouvelle voiture, mais laisse la au garage.
P. 2. Ton papa lui a demandé une pomme verte et il a mangé la.
A. 3. Je t'ai vu avec ton ami François qui a un brun chien.
A. 4. Elle le met dans son grand noir sac avant de prendre l'autobus.
P. 5. Vous donnez les à André pour manger près de la maison.
C. 6. Les enfants les regardent par la fenêtre après le déjeuner.
V. 7. J'ai acheté les bottes que vous m'as montrées dans le magasin.
V. 8. Nous nous amusons avec nos amis qui ont venus hier.
C. 9. C'est Jacques qui a vu cette annonce dans le journal hier soir.
C. 10. Hier quelqu'un nous a raconté l'histoire du petit Indien.
P. 11. Il a écrit une longue lettre mais il n'a pas l' envoyée.
V. 12. Pendant la récréation les amis nous avons chanté une chanson de Noël.
C. 13. Ils les ont enlevés puis ils les ont mis à côté de la porte.
P. 14. Alain lance son ballon à Henri mais il n'attrape le pas.
C. 15. Maintenant, je leur montre des images qui sont dans le grand livre bleu.
P. 16. Michel a perdu les dollars que son père a donnés à lui.
A. 17. La bouteille de rouge vin que je t'ai donnée hier vient de France.
V. 18. Le grand méchant loup a mange la petite poule blanche de mon frère.
A. 19. La maman de monami m'a donné son beau rouge manteau.
A. 20. Le professeur gentil leur demande de finir la dictée.
P. 21 Elle leur a lu les histoires du prince mais ils n'aiment les pas.
C. 22. Ce détail que je n'ai pas remarqué est très important.
V. 23. Elle a arrêtée chez le dentiste après la dernière classe.
V. 24. Nous avons acheté une grosse citrouille que nous a mangée.
A. 25. Ce matin ils se sont levés d'heure bonne pour étudier.

THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION

Name _____

School _____

Grade _____

ORAL SENTENCES

ANSWER SHEET

	ANSWER				CERTAINTY		
	CORRECT	ADJECTIVE	PRONOUN	VERB	SURE	UNSURE	GUESSING
1.	C	A	P	V	S	U	G
2.	C	A	P	V	S	U	G
3.	C	A	P	V	S	U	G
4.	C	A	P	V	S	U	G
5.	C	A	P	V	S	U	G
6.	C	A	P	V	S	U	G
7.	C	A	P	V	S	U	G
8.	C	A	P	V	S	U	G
9.	C	A	P	V	S	U	G
10.	C	A	P	V	S	U	G
11.	C	A	P	V	S	U	G
12.	C	A	P	V	S	U	G
13.	C	A	P	V	S	U	G
14.	C	A	P	V	S	U	G
15.	C	A	P	V	S	U	G
16.	C	A	P	V	S	U	G
17.	C	A	P	V	S	U	G
18.	C	A	P	V	S	U	G
19.	C	A	P	V	S	U	G
20.	C	A	P	V	S	U	G
21.	C	A	P	V	S	U	G
22.	C	A	P	V	S	U	G
23.	C	A	P	V	S	U	G
24.	C	A	P	V	S	U	G
25.	C	A	P	V	S	U	G

APPENDIX 2

French Learning Questionnaire

APPENDIX 2

THE ONTARIO INSTITUTE FOR STUDIES IN EDUCATION
Department of Curriculum
Modern Language Centre

FRENCH LEARNING QUESTIONNAIRE

You are going to be asked a few questions about your experiences learning French.

Take your time in answering the questions and try to answer them as honestly as possible. Remember, this study is confidential and the results do not affect your school marks in any way.

NAME:

SCHOOL:

GRADE:

SEX:

DATE OF BIRTH:

In what grade did you start learning French?

Did you know any French before you started learning it in school?

NO:

YES:

If YES: Where did you learn it?

How well did you know it:

A little ( ) Fairly well ( ) Very well ( )

Do you know any other languages? NO

YES

If YES: What languages? _____

How well do you know it(them)?

A little ( ) Fairly well ( ) Very well ( )

(1) There is a lot of printed French material around us. Indicate how often you read each of these sources in order to understand the meaning, because you are interested or curious.

	Often	Sometimes	Rarely	Never
(a) newspapers & magazines	( )	( )	( )	( )
(b) labels on packages	( )	( )	( )	( )
(c) books	( )	( )	( )	( )
(d) brochures & pamphlets	( )	( )	( )	( )

(2) Indicate how often you read each of the following in order to learn new words or grammatical structures.

	Often	Sometimes	Rarely	Never
(a) newspapers & magazines	( )	( )	( )	( )
(b) labels on packages	( )	( )	( )	( )
(c) books	( )	( )	( )	( )
(d) brochures & pamphlets	( )	( )	( )	( )

(3) How often do you do each of the following?

	Often	Sometimes	Rarely	Never
(a) Write letters in French e.g., to pen-pals	( )	( )	( )	( )
(b) Write short stories, descriptions, or other accounts in French	( )	( )	( )	( )

(4) How often do you do each of the following?

	Often	Sometimes	Rarely	Never
(a) Write out vocabulary lists to learn them.	( )	( )	( )	( )
(b) Copy out passages from a text.	( )	( )	( )	( )
(c) Practise writing spoken French, such as dictation.	( )	( )	( )	( )
(d) Make new sentences or rewrite sentences from tests or exercises to practise the difficult parts.	( )	( )	( )	( )

(5b) When you write French, how often do you do each of the following?

	Often	Sometimes	Rarely	Never
(a) Write only what you know is correct and avoid words and structures you are unsure of	( )	( )	( )	( )
(b) Check for spelling or grammar errors in your work and correct them	( )	( )	( )	( )

(5a) How often do you do each of the following when you get your French assignments or tests back.

	Often	Sometimes	Rarely	Never
(a) Rewrite the parts that had errors to correct them.	( )	( )	( )	( )
(b) Examine each error and correct it in your mind	( )	( )	( )	( )

(6) When reading a passage there are several things you can do when you come across an unknown word. Indicate how often you do each of the following.

	Often	Sometimes	Rarely	Never
(a) Check to see if it reminds you of an English word you know (or word in any other language you know).	( )	( )	( )	( )

(6) (b)	Try to figure out the meaning from the context of the passage.	( )	( )	( )	( )
(c)	Look at the beginning or ending of the word to figure out at least what part of speech it is (e.g., noun, adjective, etc.)	( )	( )	( )	( )
(d)	Try to use other information, such as pictures or your own knowledge about the subject to figure out the meaning.	( )	( )	( )	( )

(7) How often do you listen to each of the following French sources out of interest in the content?

	Often	Sometimes	Rarely	Never
(a) radio	( )	( )	( )	( )
(b) television	( )	( )	( )	( )
(c) movies	( )	( )	( )	( )
(d) people	( )	( )	( )	( )

(8) How often do you listen to each of these sources so that you can learn new words or structures or improve your pronunciation?

	Often	Sometimes	Rarely	Never
(a) radio	( )	( )	( )	( )
(b) television	( )	( )	( )	( )
(c) movies	( )	( )	( )	( )
(d) people	( )	( )	( )	( )

(9) How often do you do each of the following?

	Often	Sometimes	Rarely	Never
(a) Talk to your friends in French for the practice.	( )	( )	( )	( )
(b) Talk to native speakers.	( )	( )	( )	( )

10. How often do you do each of the following?

	Often	Sometimes	Rarely	Never
(a) Repeat sounds and words to practise their pronunciation.	( )	( )	( )	( )
(b) Repeat sentences or phrases in French.	( )	( )	( )	( )
(c) Talk to yourself in French.	( )	( )	( )	( )
(d) Memorize dialogues and repeat aloud.	( )	( )	( )	( )

11. When you try to speak French, how often do you do each of the following?

	Often	Sometimes	Rarely	Never
(a) Plan exactly how you will say something before you say it.	( )	( )	( )	( )
(b) Avoid using words or structures you are unsure of	( )	( )	( )	( )
(c) Correct errors you make while speaking	( )	( )	( )	( )

12. When listening to someone (e.g., your teacher) speak French and there is something you do not understand indicate how often you do each of the following:

	Often	Sometimes	Rarely	Never
(a) Use the general meaning of the speech to figure out the unknown parts.	( )	( )	( )	( )
(b) Use the gestures or activities of the speaker to help you understand.	( )	( )	( )	( )
(c) Use objects or cues in the environment to arrive at the meaning.	( )	( )	( )	( )

"END OF DOCUMENT"